# CONTENTS VOLUME 81 MARCH 1986


*page* 1 ALLRED, D. R., GRUENBERG, J. E. and SHERMAN, I. W. Dynamic rearrangements of erythrocyte membrane internal architecture induced by infection with *Plasmodium falciparum*

17 N'DA, E., BONNANFANT-JAÏS, M. L., PENRAD-MOBAYED, M. and ANGELIER, N. Size uniformity of ribonucleoprotein matrix particles in loops of *Pleurodeles waltlii* lampbrush chromosomes visualized by electron microscopy

29 BONNANFANT-JAÏS, M. L., N'DA, E., PENRAD-MOBAYED, M. and ANGELIER, N. Structure of landmark loop ribonucleoprotein matrices in *Pleurodeles waltlii* lampbrush chromosomes visualized by scanning electron microscopy

43 FLÉCHON, J.-E., HARRISON, R. A. P., FLÉCHON, B. and ESCAIG, J. Membrane fusion events in the $Ca^{2+}$/ionophore-induced acrosome reaction of ram spermatozoa

65 NAHAPETIAN, A. T., THOMAS, J. N. and THILLY, W. G. Optimization of environment for high density Vero cell culture: effect of dissolved oxygen and nutrient supply on cell growth and changes in metabolites

105 HEMBRY, R. M., MURPHY, G., CAWSTON, T. E., DINGLE, J. T. and REYNOLDS, J. J. Characterization of a specific antiserum for mammalian collagenase from several species: immunolocalization of collagenase in rabbit chondrocytes and uterus

125 HASTY, D. L., COURTNEY, H. S., SIMPSON, W. A., MCDONALD, J. A. and BEACHEY, E. H. Immunochemical and ultrastructural mapping of the gelatin-binding and cell-attachment regions of human plasma fibronectin with monoclonal antibodies

143 LO, C. W. Localization of low abundance DNA sequences in tissue sections by *in situ* hybridization

163 PADDOCK, S. W. and DUNN, G. A. Analysing collisions between fibroblasts and fibrosarcoma cells: fibrosarcoma cells show an active invasionary response

189 BOHRMANN, J., DORN, A., SANDER, K. and GUTZEIT, H. The extracellular electrical current pattern and its variability in vitellogenic *Drosophila* follicles

207 BOHRMANN, J., HUEBNER, E., SANDER, K. and GUTZEIT, H. Intracellular electrical potential measurements in *Drosophila* follicles

223 SURHBIER, A. and GARROD, D. An investigation of the molecular components of desmosomes in epithelial cells of five vertebrates

243 DOONAN, J. H., LLOYD, C. W. and DUCKETT, J. G. Anti-tubulin antibodies locate the blepharoplast during spermatogenesis in the fern *Platyzoma microphyllum* R.Br.: a correlated immunofluorescence and electron-microscopic study

267 GHOSH, S. and MUKHERJEE, A. S. Transcriptive and replicative activity of the X chromosome in an autosomal segmental hyperploid in *Drosophila* and its significance

283 CAMERON, I. L., HANSEN, J. T., HUNTER, K. E. and PADILLA, G. M. Elemental concentration gradients between subcellular compartments

299 FRIEDLÄNDER, M. and HAUSCHTECK-JUNGEN, E. Facultative heterochromatin in *Locusta migratoria* spermatogenesis: correlation between electron opacity and heteropycnosis

# INDEX OF AUTHORS

ALLRED, D. R. 1
ANGELIER, N. 17, 29

BEACHEY, E. H. 125
BOHRMANN, J. 189, 207
BONNANFANT-JAÏS, M. L. 17, 29

CAMERON, I. L. 283
CAWSTON, T. E. 105
COURTNEY, H. S. 125

DINGLE, J. T. 105
DOONAN, J. H. 243
DORN, A. 189
DUCKETT, J. G. 243
DUNN, G. A. 163

ESCAIG, J. 43

FLÉCHON, B. 43
FLÉCHON, J.-E. 43
FRIEDLÄNDER, M. 299

GARROD, D. 223
GHOSH, S. 267
GRUENBERG, J. E. 1
GUTZEIT, H. 189, 207

HANSEN, J. T. 283
HARRISON, R. A. P. 43
HASTY, D. L. 125
HAUSCHTECK-JUNGEN, E. 299
HEMBRY, R. M. 105
HUEBNER, E. 207
HUNTER, K. E. 283

LLOYD, C. W. 243
LO, C. W. 143

McDONALD, J. A. 125
MUKHERJEE, A. S. 267
MURPHY, G. 105

NAHAPETIAN, A. T. 65
N'DA, E. 17, 29

PADDOCK, S. W. 163
PADILLA, G. M. 283
PENRAD-MOBAYAD, M. 17, 29

REYNOLDS, J. J. 105

SANDER, K. 189, 207
SHERMAN, I. W. 1
SIMPSON, W. A. 125
SUHRBIER, A. 223

THILLY, W. G. 65
THOMAS, J. N. 65

# INDEX OF SUBJECTS

**Acrosome reaction**
of ram spermatozoa, membrane fusion events: FLÉCHON, HARRISON, FLÉCHON & ESCAIG 43
**Alkaline phosphatase**
in localization of low abundance DNA sequences: LO 143
**Amphibians**
ribonucleoprotein matrix in lampbrush chromosomes: N'DA, BONNANFANT-JAÏS, PENRAD-MOBAYED & ANGELIER 17
BONNANFANT-JAÏS, N'DA, PENRAD-MOBAYED & ANGELIER 29
**Autosomal hyperploid**
in *Drosophila*, X chromosome activity: GHOSH & MUKHERJEE 267

**Biotin**
in localization of low abundance DNA sequences: LO 143
**Blepharoplast**
located during fern spermatogenesis, using anti-tubulin antibodies: DOONAN, LLOYD & DUCKETT 243

**Cell adhesion**
in epithelial cells of five vertebrates, molecular components: SUHRBIER & GARROD 223
**Cell-attachment regions**
of human plasma fibronectin, mapping: HASTY, COURTNEY, SIMPSON, McDONALD & BEACHEY 125
**Cell culture**
optimization of environment: NAHAPETIAN, THOMAS & THILLY 65
**Chondrocytes**
immunolocalization of collagenase in: HEMBRY, MURPHY, CAWSTON, DINGLE & REYNOLDS 105
**Collagenase**
immunolocalization in rabbit chondrocytes and uterus: HEMBRY, MURPHY, CAWSTON, DINGLE & REYNOLDS 105
**Contact inhibition**
of locomotion measured by analysing collisions between cells: PADDOCK & DUNN 163
**Contact promotion**
on collision between heterotypic cells: PADDOCK & DUNN 163

**Desmocollins**
adhesion molecules in vertebrate desmosomes: SUHRBIER & GARROD 223
**Desmoplakins**
in desmosomes of five vertebrate epithelia: SUHRBIER & GARROD 223
**Desmosomes**
in epithelial cells of five vertebrates, molecular components: SUHRBIER & GARROD 223
***Drosophila***
oogenesis
extracellular currents: BOHRMANN, HUEBNER, SANDER & GUTZEIT 207
intracellular electrical potential: BOHRMANN, HUEBNER, SANDER & GUTZEIT 207
X chromosome activity in autosomal hyperploid: GHOSH & MUKHERJEE 267

**Electron microscopy**
of RNP matrix particles in loops of amphibian lampbrush chromosomes: N'DA, BONNANFANT-JAÏS, PENRAD-MOBAYED & ANGELIER 17
**Elemental gradients**
between subcellular compartments: CAMERON, HANSEN, HUNTER & PADILLA 283
**Epithelial cells**
of five vertebrates, adhesion molecules: SUHRBIER & GARROD 223
**Erythrocyte membranes**
changes in internal architecture induced by infection with *Plasmodium*: ALLRED, GRUENBERG & SHERMAN 1
***Euglena***
elemental gradients between subcellular compartments: CAMERON, HANSEN, HUNTER & PADILLA 283
**Exocytosis**
in acrosome of ram spermatozoa: FLÉCHON, HARRISON, FLÉCHON & ESCAIG 43
**Extracellular currents**
pattern and variability in *Drosophila follicles*: BOHRMANN, DORN, SANDER & GUTZEIT 189

**Facultative heterochromatin**
in *Locusta migratoria* spermatogenesis: FRIENDLÄNDER & HAUSCHTECK-JUNGEN 299
**Feulgen reaction**
in discrimination between facultative heterochromatin and euchromatin in *Locusta*: FRIENDLÄNDER & HAUSCHTECK-JUNGEN 299
**Fibronectin**
human plasma, mapping of cell-attachment and gelatin-binding regions: HASTY, COURTNEY, SIMPSON, McDONALD & BEACHEY 125
**Freeze-fracture**
erythrocyte membranes after infection with *Plasmodium*: ALLRED, GRUENBERG & SHERMAN 1

**Gelatin-binding regions**
of human plasma fibronectin, mapping: HASTY, COURTNEY, SIMPSON, McDONALD & BEACHEY 125

**Immunoblotting**
in study of molecular components of vertebrate desmosomes: SUHRBIER & GARROD 223
**Immunolocalization**
of collagenase in rabbit chondrocytes and uterus: HEMBRY, MURPHY, CAWSTON, DINGLE & REYNOLDS 105
***In situ* hybridization**
localization of low abundance DNA sequences in tissue sections: LO 143
**Intercellular electrophoresis**
in study of migration of proteins from nurse cells to oocytes in *Drosophila*: BOHRMANN, HUEBNER, SANDER & GUTZEIT 207
**Intracellular electrical potential**
measurements in *Drosophila* follicles: BOHRMANN, HUEBNER, SANDER & GUTZEIT 207

**Landmark loops**
of *Pleurodeles waltlii* lampbrush chromosomes: N'DA, BONNANFANT-JAÏS, PENRAD-MOBAYED & ANGELIER 17
BONNANFANT-JAÏS, N'DA, PENRAD-MOBAYED & ANGELIER 29
**Lampbrush chromosomes**
of amphibians, ribonucleoprotein matrix: N'DA, BONNANFANT-JAÏS, PENRAD-MOBAYED & ANGELIER 17
BONNANFANT-JAÏS, N'DA, PENRAD-MOBAYED & ANGELIER 29
**Locomotory behaviour**
of fibrosarcoma cells: PADDOCK & DUNN 163
***Locusta migratoria***
spermatogenesis, facultative heterochromatin: FRIEDLÄNDER & HAUSCHTECK-JUNGEN 299

**Malaria**
effects on internal architecture of erythrocyte membranes: ALLRED, GRUENBERG & SHERMAN 1
**Malignant invasion**
by fibrosarcoma cells on collision with fibroblasts: PADDOCK & DUNN 163
**Membrane alterations**
in erythrocytes induced by infection with *Physarum*: ALLRED, GRUENBERG & SHERMAN 1
**Membrane fusion**
in $Ca^{2+}$/ionophore-induced acrosome reaction in ram spermatozoa: FLÉCHON, HARRISON, FLÉCHON & ESCAIG 43
**Microcarriers**
in optimization of environment for Vero cell culture: NAHAPETIAN, THOMAS & THILLY 65
**Monensin**
in immunolocalization of collagenase in rabbit: HEMBRY, MURPHY, CAWSTON, DINGLE & REYNOLDS 105
**Monoclonal antibodies**
in mapping of cell-attachment and gelatin-binding regions of human plasma fibronectin: HASTY, COURTNEY, SIMPSON, McDONALD & BEACHEY 125

**Nutrients**
for Vero cell culture, optimization: NAHAPETIAN, THOMAS & THILLY 65

**Paraffin sections**
in localization of low abundance DNA sequences: LO 143
**Perfusion**
in optimization of environment for Vero cell culture: NAHAPETIAN, THOMAS & THILLY 65
***Plasmodium falciparum***
induces changes in erythrocyte membrane internal architecture: ALLRED, GRUENBERG & SHERMAN 1
***Platyzoma***
spermatogenesis, location of blepharoplast: DOONAN, LLOYD & DUCKETT 243

**Quantitative methods**
for analysing collisions between fibroblasts and fibrosarcoma cells: PADDOCK & DUNN 163

**Ribonucleoprotein matrix**
in amphibian lampbrush chromosomes: N'DA, BONNANFANT-JAÏS, PENRAD-MOBAYED & ANGELIER 17
BONNANFANT-JAÏS, N'DA, PENRAD-MOBAYED & ANGELIER 29

**Scanning electron microscopy**
of landmark loop RNP matrices in *P. waltlii* lampbrush chromosomes: BONNANFANT-JAÏS, N'DA, PENRAD-MOBAYED & ANGELIER 29

**Spermatogenesis**
in *Locusta migratoria,* facultative heterochromatin: FRIEDLÄNDER & HAUSCHTECK-JUNGEN 299
in *Platyzoma*, location of blepharoplast with anti-tubulin antibodies: DOONAN, LLOYD & DUCKETT 243

**Spermatozoa**
ram, membrane fusion in acrosome reaction: FLÉCHON, HARRISON, FLÉCHON & ESCAIG 43

**Subcellular compartments**
elemental concentration gradients between: CAMERON, HANSEN, HUNTER & PADILLA 283

**Tubulin**
antibodies to, locate blepharoplast during fern spermatogenesis: DOONAN, LLOYD & DUCKETT 243

**Uterus**
immunolocalization of collagenase in rabbit: HEMBRY, MURPHY, CAWSTON, DINGLE & REYNOLDS 105

**Vero cells**
optimization of environment for culture: NAHAPETIAN, THOMAS & THILLY 65

**Vibrating probe**
in study of extracellular electric current in *Drosophila* follicles: BOHRMANN, DORN, SANDER & GUTZEIT 189

**X chromosome**
activity in *Drosophila* autosomal hyperploid: GHOSH & MUKHERJEE 267
of *Locusta migratoria* is facultatively heterochromatic: FRIEDLÄNDER & HAUSCHTECK-JUNGEN 299